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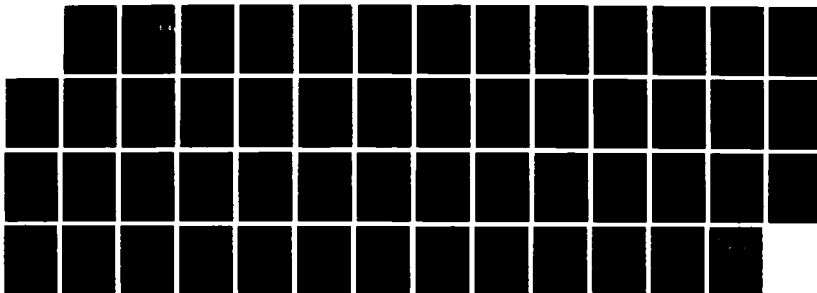
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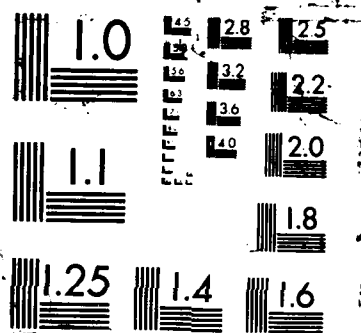
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TACTICAL SURPRISE: BEYOND PLATITUDES

by

Major Charles D. Franklin
Armor

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School of Advanced Military Studies
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

December 1987

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ABSTRACT

TACTICAL SURPRISE: BEYOND PLATITUDES by MAJ Charles D. Franklin, USA, 40 pages.

— This monograph discusses the elements and dynamics of tactical surprise on the mid- to high-intensity conventional battlefield. Surprise has been a decisive principle of war throughout history. Today, however, surprise is increasingly critical to success on the battlefield. Surprise must be fully harnessed as an element of combat power. We cannot deal in platitudes--the cost is too great.

The study first examines elements of creating and exploiting surprise by presenting a theoretical basis for considering surprise on the battlefield. Next, the evolution of methods to apply the principle of surprise on the modern battlefield is looked at. This section assesses the impact of major changes in conditions by focusing on the battlefield from World War I to the present emerging battlefield. As technology and capabilities increase the complexity and lethality of the battlefield, methods to achieve and exploit surprise also increase in complexity.

Finally, a brief consideration of existing doctrinal coverage of the principle of surprise shows the lack of sophistication paid to surprise in current doctrine. Recommendations for further efforts and corrective actions are presented in the conclusion. *Military doctrine is not doctrine*

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TACTICAL SURPRISE: BEYOND PLATITUDES

SECTION 1. INTRODUCTION

The object of all operations is to impose our will upon the enemy--to achieve our purposes. To do this we must throw the enemy off balance with a powerful blow from an unexpected direction, follow up rapidly to prevent his recovery and continue operations aggressively to achieve the higher commander's goals.(1)

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Purpose

Nine principles of war provide the foundation of AirLand Battle doctrine, it is important that we have a complete understanding of each of these principles. This paper examines one of them - surprise.

The Problem

Surprise has been a decisive principle of war throughout history; the list of victories brought about through surprise is endless. Erfurth clearly points out its importance: "Surprise is today more indispensable than ever before. Every military plan and its execution should be conceived in view of the necessity of surprise."(2) His proposition remains true today--surprise is increasingly critical for success on the battlefield. Increasingly accurate reconnaissance, surveillance, and target acquisition systems provide unparalleled responsiveness to the commander. Combined with ever increasing lethal and mobile forces, these systems are dramatically changing the face of the battlefield. The U.S. Army must be able to win outnumbered on this highly intense battlefield. As capabilities to see and engage continue to expand the depth of the battlefield, surprise becomes an increasingly critical element to concentrating the combat power necessary to win. Without surprise the enemy is

able to react to our operations in time massing superior combat power to defeat them. Accordingly, U.S. commanders must be masters at the art of creating and exploiting surprise.

Douhet said, "Victory smiles on those who anticipate the changes in the character of war, not upon those who wait to adapt themselves after the changes occur." (3) Key to adapting to changes in war is a complete understanding of essential principles, a timely awareness of changing conditions of the battlefield, and the subsequent development of current methods which properly apply the principles to existing conditions. As an essential element of victory the nature and characteristics of surprise on the modern battlefield must be fully understood. What are the characteristics of surprise? What are its effects? How is it created? How is it exploited? What actions are necessary to achieve surprise under the current battlefield conditions?

If superiority of forces is inconceivable without surprise then an understanding of these questions is critical to success. Surprise must be fully harnessed as an element of combat power in organizational and material development, leader training, and operational planning and execution. Simple recognition of its importance will not suffice, we cannot deal in platitudes--the cost is too great. Doctrine is the first step to achieving these tasks. Does current AirLand Battle doctrine adequately address the role of tactical surprise considering the emerging battlefield?

Scope

Five parameters define the scope of this monograph. First, it focuses on applying the principal of surprise at the tactical level of war. Although strategic and operational surprise are critical components of warfighting they

are beyond the purview of this study. Second, this paper concentrates primarily on mid- to high-intensity warfare on a conventional battlefield. While the principle of surprise is of major importance throughout the spectrum of conflict, its application may be considerably different in unconventional war. While a significant issue, it should be addressed separately. Third, this monograph does not address the prevention of surprise or actions in response to surprise. Fourth, in considering the changing battlefield the study looks only at those systems currently fielded or undergoing final development. It does not consider revolutionary changes to the battlefield, rather it looks at an evolution of warfare. Finally, it does not go beyond doctrine in an assessment of our current ability to apply the principle of surprise on the modern battlefield. An initial assessment of doctrine is the start point to considering the adequacy of education, training, organizations, and equipment in relation to creating and exploiting surprise.

Assumptions

1. Current technology being developed or fielded will be present on the next battlefield.
2. The U.S. Army must continue to be capable of fighting outnumbered against an enemy with full technological capabilities.
3. The U.S. will not gain a significant technological breakthrough in the next 15 years.
4. AirLand Battle fundamentals will continue to define U.S. Army doctrine throughout the remainder of the century.

Methodology

This monograph discusses surprise from its basic elements to its application on the modern battlefield. A framework for understanding the key elements of the principle is first established. Then, application of the principle as it has evolved in 20th century warfare is looked at. Next, modern capabilities, conditions, and trends are considered to arrive at operational requirements for the application of surprise on the current and emerging battlefield. An assessment of current doctrine in view of these operational requirements examines the adequacy of U.S. Army consideration of this critical principle.

SECTION II. THE PRINCIPLE OF SURPRISE

----the universal desire for relative numerical superiority
-- leads to another desire, which is consequently no less
universal: that is to take the enemy by surprise. The desire
is more or less basic to all operations, for without it
superiority at the decisive point is hardly conceivable.(4)
Clausewitz

According to Clausewitz surprise is essential in gaining superiority at the decisive point. In his words, "Only three things seem to us to produce decisive advantages: surprise, the benefit of terrain, and concentric attack."(5) Surprise is especially critical to a force which is generally outnumbered because surprise provides the same effect as overwhelming superiority. Clausewitz strongly enforces the importance of this aspect of surprise: "This type of numerical superiority is quite distinct from numerical superiority in general: it is the most powerful medium in the art of war."

Erfurth is equally emphatic. In his classic treatise, Surprise, he states, "Every military plan and its execution should be conceived in view of the necessity of surprise."(6) To win, the outnumbered force must create conditions for gaining and exploiting superior combat power at decisive points before the enemy can anticipate and react. This cannot be accomplished unless surprise can be gained and rapidly exploited; otherwise, the opposing force will respond with sufficient combat power to prevent success.

Clausewitz says surprise "lies at the root of all operations without exception."(7) Yet, he considers surprise most effective at the tactical level of war. At this level, time and space are constrained so the enemy has less time to anticipate and react. Also, in his view surprise is equally important in both the defense and the offense. In fact, at the tactical level Clausewitz contends the defender has the advantage: "The defender is better placed to spring surprises by the strength and direction of his own attacks."(8)

Clausewitz also emphasizes the importance of correct actions: "Only the commander who imposes his will can take the enemy by surprise; and in order to impose his will, he must act correctly. If we surprise the enemy with faulty measures, we may not benefit at all, but instead suffer sharp reverses."⁽⁹⁾ Incorrect actions may fail to create surprise. Even worse, poorly directed actions to achieve surprise can quickly be turned against a force. Because an unexpected reaction by the enemy can produce surprise against us, actions to create surprise are essential--especially at the tactical level of war where time and space is compressed. The impact of surprise on success is too important to be left only to chance. Actions to create surprise must be planned and properly executed, "faulty measures" are too costly.

Therefore, the principle of surprise cannot be taken lightly. The benefits are great, but the costs of ill conceived actions can be staggering. The commander must be capable of creating and exploiting the conditions for surprise, but before the commander can correctly apply the principle to the current battlefield he must fully understand it. Only when the principle is understood can doctrine adequately reflect its application on the current and emerging battlefield. Accordingly this section establishes a basic framework for understanding the principle of surprise.

Forms of Surprise

J.F.C. Fuller said surprise comprises two basic forms: moral surprise and material surprise.⁽¹⁰⁾ With moral surprise the enemy is taken totally unaware. With material surprise the enemy is aware, but is unable to react effectively. Moral surprise is the ultimate form--to catch the enemy totally by surprise. However, total surprise is not necessary; in fact, as soon as the enemy becomes

aware of reality, moral surprise is lost. Herein lies the critical importance of material surprise--even after its initial impact is lost surprise can be still be maintained. Material surprise can be sustained (or regained) even if moral surprise cannot be achieved or is lost. (11) As the British say, "The enemy need not be astonished in order to be surprised."

Variations of Surprise

There are at least six varieties of moral and material surprise. Each has its own characteristics and makes a unique impact on the battlefield. These variations are intention, time, place, force, method, and technology. Although variations of surprise can exist individually, tactical surprise achieved during battle usually comprises a combination of variations.(12) This combination of different variations intensifies the effects of moral and material surprise.(13)

Surprise of intention relates to the basic decision of what action to take; for example, whether to attack or to defend. This variation of surprise is produced when the enemy is forced to anticipate actions from several possible courses of action. This is the essence of the concept of alternate objectives, to be discussed later. The enemy must anticipate the commander's intention to go for one objective out of different possible objectives.

Surprise of place is projecting combat power at an unexpected place. The time of combat may be clear to the enemy but location is unanticipated. Similarly, surprise of time is projecting superior combat power at an unexpected time. The enemy may anticipate the point of engagement but not the instance, in both forms expectation is a key element. Surprise of time and place are complementary and historically are the most commonly considered forms of surprise. It is not necessary that the enemy remains oblivious to either time

or location; only that he becomes fully aware of what is happening too late to react effectively (material surprise).

Surprise of method consists of an unexpected change of habitual tactics or techniques. Clausewitz defines method as "a constantly recurring procedure that has been selected from several possibilities. It becomes routine when action is prescribed by method rather than by general principles or individual regulation."⁽¹⁴⁾ Methods rapidly become expectations of the enemy. Surprise of method consists of changing methods to act contrary to these expectations. As will be seen, surprise gained by the employment of new tactics adds additional punch to their effectiveness. While an unanticipated change in tactics produces moral surprise, the failure to adjust to the appearance of new tactics on the battlefield produces material surprise.

Surprise of force consists of projecting a greater amount of combat power than anticipated by the enemy. He may be aware of time and place but is unprepared for the resulting correlation of forces. With moral surprise the amount of force present is totally unexpected. Again, it is not necessary that the enemy remain totally unaware, only that he becomes aware too late to react effectively.

Technological surprise is the introduction of new technology to the battlefield for which the enemy is unprepared. If this technology is sufficient to change the dynamics of the battlefield, surprise is achieved. However, unlike other variations of surprise opportunities for technological surprise and surprise of method diminish after their initial introduction to the battlefield. "Every new weapon is immediately imitated in time of peace by the neighbor, in time of war by the enemy. No country has a monopoly of any weapon. This is a law. No technical advantage lasts for a long period of time."⁽¹⁵⁾

Although examples of technological surprise also appear throughout history, not until the accelerated pace of technological development started with the industrial revolution did it become a significant form of surprise. Material surprise is achieved when the enemy anticipates the technology or its effects, but is unable to counter them. On the other hand, with moral surprise the enemy is not only unprepared, but also unaware of the technology or its effects--the technology carries an added punch by its sudden appearance on the battlefield.

Surprise can consist of any one of these variations; but, variations usually combine to intensify the effects of surprise. The greater the intensity of surprise the greater its effects. This is pointed out in Barton Whaley's study of the occurrence of surprise in twentieth century warfare from 1914 to 1968. In a study of 168 battles from 16 wars, Barton Whaley assessed the impact of surprise on their outcome. He concludes that surprise rarely appears in just one variation, but usually consists of two or more. Furthermore, the instances where surprise was most intense--consisting of 3 or more variations--produced significant results. "Out of 59 battles fought without any initial surprise, only 2% substantially exceeded its general's expectations while 60% ended in abject failure. Conversely, out of 50 battles where surprise was intense, 34% far exceeded their objectives and only 2% ended in defeat.(16)

Causes of Surprise

The two factors that produce surprise are secrecy and speed.(17)
Clausewitz

Surprise is caused when reality does not conform to expectations, the more drastic the difference the greater the intensity of surprise. At the

tactical level, the basic cause of surprise is the unexpected appearance of superior combat power. According to Clausewitz, "Surprise becomes effective when we suddenly face the enemy at one point with far more troops than he expected." (18) In all instances the objective is to present the enemy with a situation for which he is unprepared in terms of the five variations of surprise discussed in section II--place, time, intention, method, force, and technology.

However, the role of chance cannot be ignored, surprise can be a product of chance as well as planning. While planning enables the commander to anticipate surprise, recognition and initiative enables him to improvise in opportunities of chance. Even with planning, the enemy and friction can alter events during execution. When this happens, the commander must exercise initiative to achieve surprise. As S.L.A. Marshal said, "60 per cent of the art of command is the ability to anticipate; 40 per cent of the art of command is the ability to improvise." (19) Thus, while the commander can plan for surprise, he must also be prepared to recognize and exploit opportunities for surprise created by chance. Initiative, an appreciation of the higher commander's intent, and a thorough understanding of the elements of surprise enable the commander to exploit these opportunities.

Nevertheless, it is planning for surprise which enables the commander to synchronize the effects of surprise with operations. Planning for surprise enables the commander to maximize its use as an element of combat power, enabling him to create the conditions for surprise which otherwise would not exist. To create conditions for surprise the commander enforces false expectations and conceals actual operations. Key elements in creating these conditions include intelligence, secrecy and security, deception, and maneuver.

Intelligence.

Know the enemy and know yourself; in a hundred battles you will never be in peril.

When you are ignorant of the enemy but know yourself, your chances of winning or losing are equal.

If ignorant both of your enemy and of yourself, you are certain in every battle to be in peril.(20)

Sun Tzu

Good intelligence is essential to creating surprise. The key elements of intelligence to support surprise consist of knowing not only the enemy's capabilities and dispositions, but also his expectations. Knowing what the enemy expects enables the commander to use these expectations to facilitate surprise. Knowing the enemy's vulnerabilities to surprise enables the commander to conduct deception and maneuver to enhance or create conditions for surprise.

Secrecy and Security.

Secrecy is achieved through operations security and deception. Operations security denies information to the enemy about friendly capabilities and intentions by identifying, controlling, and protecting indicators associated with military operations and other activities. Deception, discussed specifically in the next section, enhances security by distracting the enemy.

Erfurth emphasizes the role of secrecy as a means to surprise. He defines secrecy as hiding "one's own plans from the enemy until he is unable to take effective counter-measures." (21) According to Erfurth, secrecy consists of concealment, camouflage and deception. Concealment and camouflage prevent the enemy from determining your true course of action. Deception distracts the enemy, even when he sees the true course of action. When secrecy cannot be maintained speed must be employed or surprise will not be achieved.

Security is critical in all variations of surprise. It facilitates protection of the force and, equally important, ensures the enemy remains unaware until it is too late to react. Security also enables forces to use technology to achieve surprise by employing new technology for which the enemy is not prepared.

Deception.

All warfare is based on deception. Therefore, when capable, feign incapacity; when active, inactivity. When near, make it appear that you are far away; when far away, that you are near. Offer the enemy a bait to lure him; feign disorder and strike him. When he concentrates, prepare against him; where he is strong, avoid him. Anger his general and confuse him. Pretend inferiority and encourage his arrogance. Keep him under a strain and wear him out. When he is united, divide him. Attack where he is unprepared; sally out when he does not expect you.(22)
Now war is based on deception. Move when it is advantageous and create changes in the situation by dispersal and concentration of forces.(23)
Sun Tzu

In a state of weakness and insignificance, when prudence, judgment, and ability no longer suffice, cunning may well appear the only hope. The bleaker the situation, with everything concentrating on a single desperate attempt, more readily cunning will be free to augment each other to the point of concentrating a faint glimmer of hope into a single beam of light which may yet kindle a flame.(24)
Clausewitz

Deception is perception management.(25) It is the act of misleading the enemy into doing something which weakens his strategic or tactical position. It serves at least two purposes. First, as discussed in the previous section, deception can be used to support security in the form of camouflage and distractors. Second, it is an increasingly critical element of creating conditions for surprise, significantly increasing combat power capabilities by

distracting the enemy. Because deception is a powerful combat multiplier it is particularly important to an overall outnumbered force.

Rather than increase the enemy's uncertainty, deception reduces it, but does so by creating or enforcing faulty perceptions which reduce his freedom of action when confronted with the real situation. When he reacts to these faulty perceptions he sets the conditions for surprise.

There are two basic types of deception. The first type is distraction. It causes the enemy to focus his attention away from the main effort or key resources and to concentrate his forces in the wrong place. The second type of deception is attraction. It draws the enemy's attention to desired areas in which he can be destroyed or controlled to enhance friendly operations. In both types of deception, operations must be tailored to the adversary. The deception story must be believable and supported by the enemy's intelligence collection systems. The message delivered must be understood and presented so that it is properly interpreted by the enemy.(26)

The basic elements of battlefield deception include: security, protection of the force, camouflage, cover, and offensive deception measures. Offensive deception measures consist of feints, demonstrations, ruses, and displays. Each element requires both operational and technical support to adequately replicate the intelligence the enemy is capable of collecting. Operational support consists of applying the forces necessary to achieve the deception. Today, for example, technical support includes physical or visual displays, electro-magnetic displays, audio-acoustic displays, and thermal-light displays.

Maneuver.

Only through surprise action can collision with the enemy's prepared positions be avoided, and to gain surprise nothing is more important than superiority in mobility.(27)

MacArthur

Maneuver is "the movement of forces in relation to the enemy to secure or retain positional advantage."(28) Maneuver produces surprise through the impact of its effects on the opposing force. These effects include psychological shock, positional advantage, and momentum to leverage available combat resources against the enemy.(29) However, the essential element of maneuver leading to surprise is speed of movement or combat power concentration relative to the enemy.

In his strategy of the indirect approach B.H. Liddell Hart looks at employing paths of least resistance and least expectation as means to achieve tactical surprise. His focus on maneuver adds emphasis to Clausewitz's second factor--speed. "Movement generates surprise, and surprise gives impetus to movement. For a movement which is accelerated or changes its direction inevitably carries with it a degree of surprise, even though it be unconcealed; while surprise smoothes the path of movement by hindering the enemy's counter-measures and counter-movements."(30) Through maneuver the commander is able to achieve moral or material surprise of place and time.

Effects of Surprise

Surprise produces significant psychological and physical effects which present opportunities for exploitation and produce conditions for defeat of the enemy. It is these effects which make surprise such a powerful element on the battlefield. B. H. Liddell Hart says surprise causes "the dislocation of the enemy's psychological and physical balance."(31) He expands on this concept of psychological dislocation by referring to Stonewall Jackson:

'Stonewall' Jackson aptly expressed this in his strategical motto--'Mystify, mislead, and surprise'. For to mystify and to mislead constitutes 'distraction', while surprise is the essential cause of 'dislocation'. It is through the 'distraction' of the commander's mind that the distraction of his forces follows.(32)

Clausewitz also recognizes the psychological effects of surprise. He says, "it confuses the enemy and lowers his morale." He later adds, "it loosens the bonds of cohesion."(33) The physical effect of surprise is similar to that of superior mass, but is magnified by psychological impacts which effect both the cybernetic and moral domain of the enemy force. Because of this effect, surprise is a substantial combat power multiplier. The inability of the enemy to react effectively creates opportunities to mass superior combat power with less force than would otherwise be required. Surprise can achieve the edge necessary to gain superiority in all elements of combat power--protection, firepower, maneuver, and leadership--even against an overall superior enemy.

Both moral and material surprise produce psychological and physical effects; however, because of its effects, moral surprise is the stronger form of the two. First the surprise is total. The appearance of forces is totally unexpected; consequently, the surprise is a totally unexpected concentration of combat power. Even more significant is the psychological blow to the soldier's will to fight. While the initial effect of moral surprise is in the moral domain, moral surprise also leads to a breakdown of command and control. Forces cannot respond because of the total lack of expectation. These conditions--psychological shock and inability to command and control--lead to physical destruction as the attacking force is able to project superior combat power.

When the enemy becomes aware of reality moral surprise is lost. However, properly exploited, moral surprise can be replaced with material surprise. The effects of material surprise spring from the enemy's inability to react

sufficiently to regain sufficient combat power. Consequently, superior combat power produces physical destruction which leads to a cybernetic collapse of the force. Finally, this loss of cohesion leads to a collapse in the moral domain. The enemy is unable to fight as an organized force. Fighting units become isolated individual elements and combat power cannot be controlled or concentrated. Faced with overwhelming combat power the enemy is not only defeated physically, but also morally--his will to fight collapses.

Exploiting Surprise

Surprise is not an end in itself. Rather, it is a means for gaining opportunities which must be rapidly and continuously exploited to defeat the enemy. In the words of B.H. Liddell Hart, "You cannot hit the enemy with effect unless you have first created the opportunity; you cannot make that effect decisive unless you exploit the second opportunity that comes before he can recover."⁽³⁵⁾ After surprise has been achieved intelligence, security, deception, and maneuver continue to be critical functions to exploit surprise. Instead of being directed to creating conditions of surprise these functions are now employed to exploit these conditions.

If the enemy recovers, the advantages gained through surprise are lost. Accordingly, the effects of surprise must be rapidly exploited once they are achieved. Rapid exploitation not only sustains the psychological and physical effects of surprise, but also prevents the enemy from employing new forces to recover his tactical balance. Given sufficient time, the enemy can recover, maneuver to apply sufficient combat power, and possibly seize the initiative. Therefore, after surprise has been achieved operations must continue at a rate greater than the enemy's ability to react. The advantage gained

through the creation of surprise is exploited by continuing to create unexpected and dangerous situations faster than the enemy can deal with them. Superior tempo and combat power are key to exploiting surprise.

Tempo is a sequence of events over time. Tempo can be measured by the time it takes to accomplish required tasks. The effects of surprise put the enemy at a disadvantage in terms of time. The enemy must now react to an unexpected situation--he must establish sufficient tempo to overcome not only the effects of surprise but also the advantage of momentum gained by the friendly force.

Richard Simpkin breaks tempo down into two general elements--mounting tempo and execution tempo. Mounting tempo is synonymous with planning and reaction time. It consists of actions from receipt of orders to start of execution. It is determined by the rate of events such as planning, decision-making, controlling and moving forces, and sustaining activities -- all those activities required prior to execution of an operation. Execution tempo is the rate with which necessary actions are accomplished from start of execution to accomplishment of the objective. Execution tempo comprises actions to project combat power during execution. It is determined by the same type of activities mentioned under mounting tempo, but it also includes actions necessary to direct the elements of combat power--firepower, protection, maneuver, and leadership activities.(36)

It is tempo relative to that of the enemy which is meaningful in exploiting surprise. A measure of relative tempo is the time it takes to accomplish required tasks relative to the time it takes the enemy to accomplish corresponding tasks. If the enemy is able to achieve a tempo sufficient to recover his balance he has achieved a superior tempo--regardless of the actual speed with which associated actions are accomplished. So, to exploit surprise,

the commander must sustain a tempo greater than the tempo the enemy must achieve to recover his balance. Two means are available to achieve a superior tempo: slow down the enemy's tempo and increase friendly tempo. Actions to retard the enemy's tempo include disrupting his command and control, interdicting reinforcing forces, and overloading the enemy commander with conflicting information and new situations to which he must react.

Friendly and enemy tempo are both affected by friction--"the force that makes the apparently easy so difficult." It is the effect of chance on all activities in war. As an element of resistance the commander must consider its effects on all operations and must be prepared to exercise the flexibility and initiative necessary to overcome its impact. "The good general must know friction in order to overcome it whenever possible, and in order not to expect a standard of achievement in his operations which this very friction makes impossible." (37)

The second key element of exploitation is sufficient combat power. Sufficient forces must be available to sustain the operation. It is the application of this mass combined with superior tempo that achieves the momentum necessary to keep the enemy off balance until the objective is accomplished. Hence, the commander must know the enemy's capabilities; he must anticipate or recognize the effects of surprise on these capabilities; and, he must know his own resources. The failure to anticipate surprise and to keep sufficient force available to maintain momentum of the operation can lead to an inability to exploit surprise.

SECTION III. SURPRISE ON THE BATTLEFIELD

As water has no constant form there are in war no constant conditions.(39)

Sun Tzu

Historical Analysis

Current battlefield conditions and available capabilities determine the application and impact of surprise on the battlefield. Throughout this century technology has been the single most significant element of change, driving both conditions and capabilities. Technology introduced during World War I dramatically changed most aspects of warfare--to include the application of surprise. The trends and capabilities established with the First World War set the stage for today's battlefield. Therefore, an examination of current conditions and their effect on applying the principle of surprise should begin there.

World War I

The impact of technological developments on the application of surprise was considerable. New battlefield conditions and capabilities generated totally new considerations in application of the principle. New capabilities in technology and tactics presented increased potential for creating both moral and material surprise. However, technological developments also increased the complexity of measures necessary to create and exploit surprise. Actions necessary to create surprise reflected the increased capabilities afforded by new technology. At the same time, however, technological advancements rendered previous methods for achieving surprise inadequate.

Intelligence capabilities increased dramatically during the First World War. The increasing use of wire and radio afforded new opportunities to monitor enemy communications. However, air power was the most significant improvement

in intelligence collection. With the advent of air power the battlefield was forced to deal with a new operational medium. The major tactical functions for air operations during the war included aerial reconnaissance and observation. Aviation significantly increased the depth of the battlefield -- enemy dispositions were could be determined by air observers and recorded in aerial photography. The ability to see the enemy throughout the full depth of the battlefield greatly increased the accuracy of planning for surprise.

However, the same capabilities which improved intelligence collection created increasingly difficult security requirements. Old measures of operations security were now inadequate and forces once secure from enemy observation were suddenly vulnerable. For example, troops previously masked from enemy observation were now exposed from the air driving new concepts of camouflage, deception, and air defense measures to meet the threat. The engagement of ground forces from the air was also introduced. This aspect of airpower heralded a new increase of battlefield depth which would manifest considerable changes in the next war. To achieve the security necessary for surprise required new techniques--counter air operations, movement during adverse weather conditions, and growing importance of deception ranging from passive (use of camouflage) to active measures (distraction). Also, susceptibility to communications intercept required new considerations for safeguarding information.

Tactical deception was not a major element of creating surprise during World War I. However, as enemy capabilities to gather intelligence increased, deception began to emerge as a major consideration. For example, camouflage was employed at the Somme to impede aerial observation, and dummy tanks were used during the Battle of Cambrai to distract attention from the main effort.

Advancements in firepower presented tremendous obstacles to maneuver. Tactical maneuver was considerably restricted by the increased accuracy, range, lethality, and volume of direct and indirect fires. The accuracy and lethality of firepower gave tremendous weight to defense while lack of tactical mobility prevented the offense from receiving the same benefits. Even massive increases in the force ratio could not overcome the defensive power of artillery and the machine gun. The development of new technology and new tactics was necessary to overcome the defensive strength of firepower capabilities.

The exploitation of surprise also became increasingly complex as advancements in firepower, mobility, and aviation considerably reduced opportunities to exploit surprise. While techniques for creating tactical surprise adapted to the new conditions of the battlefield, capabilities for exploiting surprise did not. Even instances of overwhelming tactical surprise usually were not exploited. There are at least two major causes for this inability--the failure to anticipate the effects of surprise and the inability to achieve the necessary tempo and combat power. The necessary tactical tempo to overcome operational advantages could not be achieved because the conditions of the terrain and the lethality of defensive firepower considerably reduced tactical mobility while the railroad and motor vehicle considerably increased operational mobility. The enemy could restore his balance before the effects of surprise could be exploited. In addition, sufficient combat power could not be massed to overcome the lethality of the machine gun and indirect fires. While the Germans concentrated primarily on the evolution of new tactics to overcome the deadlock, the allies looked primarily to new technology. For example, the tank and German infiltration tactics evolved to increase tactical tempo and restore maneuver to the battlefield.

Surprise in the Battle of Cambrai.

The Battle of Cambrai, 20 November to 3 December 1917, is a prime example of the possibilities for surprise. The battle illustrates the application of surprise as it evolved on the World War I battlefield.

As a result of efforts to create conditions of multiple variations of surprise, moral surprise was achieved with overwhelming results. Secrecy was maintained. Tight security and tactical deception in the form of feint attacks that used dummy tanks contributed to operations security. The British secretly massed cavalry, infantry, artillery, machine-guns and tanks without discovery by the Germans. To do so, however, required consideration of new battlefield capabilities discussed above. For example, movement into wooded terrain took place at night while fighter aircraft maintained local air superiority to prevent German reconnaissance aircraft from gathering intelligence during the day. The disposition and massing of British forces was not detected. Thus, the conditions for surprise of time and place were established through the use of these additional measures not necessary prior to this war.

Surprise of time was lost, however, when prisoners captured on the 18th alerted the Germans to the impending attack. It was a breach of security, though, which revealed the actual time of attack. The Germans intercepted a telephone conversation which disclosed the time of attack. New communication capabilities now imposed new considerations for operational security to preserve the conditions for surprise. However, even though surprise of time was lost, the presence of other variations of surprise produced overwhelmingly success.

A massive employment of tanks launched the attack on 20 November 1917, achieving technological surprise. "The riflemen were so totally surprised that there was almost no defence ... the tanks looked terrifying... and many brave

soldiers lost their heads and panicked." (40) The Germans had no appropriate response to its massive employment, even though they knew of its existence. Likewise, individual soldiers were unprepared for the psychological shock of armored warfare. Furthermore, tactical surprise was compounded by employing surprise of method along with technological surprise.

Surprise of method was achieved by changing the employment of artillery. The normally lengthy intense artillery preparation to soften defensive positions and destroy barbed wire was eliminated. To support this change in artillery employment, reconnaissance aircraft collected intelligence on enemy dispositions, focusing primarily on enemy artillery positions. Artillery was then pre-registered on selected targets identified during aerial reconnaissance. Indirect fires were withheld until the tanks and infantry began to advance, then concentrated on enemy artillery rather than troop positions and barbed wire. Tanks replaced the artillery in this role -- clearing gaps and placing fires on defensive positions. Artillery also placed smoke across forward slopes and crest lines to blind enemy observation and machine-gunners. In addition, allied aircraft bombed enemy gun positions and suspected headquarters as machine-guns suppressed hostile infantry in front-line trenches. This change in tactics set the stage for moral surprise. The Germans, relying on the normally extensive artillery preparation to anticipate Allied attacks, were caught totally unaware. (41)

Although the effects of surprise were overwhelming, the British were unable to exploit the opportunity presented. Their inability to maintain material surprise also prevented greater success. Consequently, by nightfall, the attack stalled after advancing six miles. Several factors contribute to the failure to exploit this success. The maneuver of tanks, artillery, infantry and cavalry

were not synchronized. Inadequate communication and mobility also disrupted the tempo of the operation. Perhaps most importantly, the effects of surprise were not anticipated so reserves were not created to continue the attack.

Consequently, the Allies could not maintain sufficient tempo to prevent the Germans from recovering their balance. The next day German troops sent massive reinforcements to the sector using the operational capability afforded by the railroad. Still, the results of the surprise achieved at Cambrai were tremendous. The attack took more ground than 51 British divisions did at Passchendaele during the preceding four months at a cost; of a quarter million casualties on each side. The British suffered a total of 4,000 casualties to 8,000 Germans taken prisoner alone.(42)

On 30 November the Germans counterattacked. The counterattack achieved moral surprise of time, strength, and method. New infiltration tactics enabled the Germans to achieve an execution tempo sufficient to sustain material surprise. The results were equally impressive and the British lost the gains acquired during their attack.

The British Official History describes the assault as follows:

Preceded by patrols the Germans had advanced at 7 a.m. in small columns bearing many light machineguns, and, in some cases, flamethrowers. From overhead low flying airplanes, in greater numbers than had hitherto been seen, bombed and machinegunned the British defenders, causing further casualties and, especially, distraction at the critical moment. Nevertheless few posts appear to have been attacked from the front, the assault sweeping in between to envelop them from flanks and rear.(43)

Immediately following the counterattack, Crown Prince Rupprecht's Army Group staff circulated a memorandum to its units stressing the importance of surprise as demonstrated at Cambrai.(44) German infiltration tactics represented a new age of combined arms operations. Commonly known as "Hutier Tactics", they were

characterized by a short, but intense, accurate artillery bombardment using new techniques to acquire and engage specific targets selected from aerial photographs. They were the result of German emphasis on developing tactical solutions to the trench deadlock rather than searching for technological solutions.

World War II

The First World War was the beginning of rapid technological advancement, introducing an unprecedented acceleration of technology that continues today. Technological change permeated every aspect of warfare. The performance of new weapons systems; the interaction of these systems; and their impact on doctrine, tactics, and decision-making caused a quantum leap in the complexity of warfare. Consequently, the considerations for employing surprise during the First World War rapidly became outdated as battlefield complexity increased. How did the changing nature of the battlefield affect the creation and exploitation of tactical surprise?

Intelligence capabilities to support planning for surprise increased dramatically. The most significant advancement during the First World War was achieved through aerial observation. This capability continued to mature as developments in aviation increased the speed and range of aircraft and improvements in aerial photography improved the accuracy and timeliness of intelligence. However, equally significant developments produced new means of intelligence collection during the Second World War. The increased use of electronic communication at all levels of war made communications intelligence a major source of information. The ability to use the radio in tactical operations opened new opportunities to determine enemy vulnerabilities to surprise.

At the same time, operational security had to cope with the new capabilities to see the battlefield. During the previous war requirements for security were mostly limited to ground and air observation. As the ability to observe the battlefield improved, deception assumed an increasingly important role in operational security. But, just as the advent of aviation produced new requirements, the new electronic dimension of the battlefield required additional actions to ensure operations security. The vulnerability to communications intercept drove new encryption capabilities to protect sensitive communication. Essentially the trend toward a growing number of considerations for maintaining secrecy continued.

The most dramatic development occurred in maneuver. The combination of infantry, artillery, and air power with tank forces introduced mechanized warfare to the battlefield. The radio, though, became the key instrument in achieving the full potential of mechanized operations. Guderian employed the radio to control and synchronize the maneuver of these elements of mechanized warfare. In exercises his formations continually out-maneuvered and surprised much larger conventional formations.(45)

Mechanized forces made possible maneuver warfare and an unprecedented tactical tempo. The underlying principles of the Blitzkrieg demonstrate these new capabilities to exploit surprise and sustain material surprise. Initial surprise is exploited by a continuous high tempo. The attacking force maintains the tempo by a "torrent-like" process--bypassing strong points and continually keeping the enemy off balance. The unexpected nature of the initial attack creates moral surprise. The tempo of the operation rapidly exploits the surprise. Even after moral surprise is lost the enemy is unable to react--material surprise is maintained. The threat to alternate objectives,

timely concentration of combat power, and rapid maneuver keeps him off balance.

B. H. Liddell Hart explains the essence of blitzkrieg this way:

It is the persistent pace, coupled with the variability of the thrust-point, that paralyzes the opponent. For at every stage, after the original break-through, the flexible drive of the armoured forces carries simultaneously several alternative threats, while the threat that actually develops into a thrust takes place too quickly for the enemy's reserves to reach the spot in time to stiffen the resistance there before it collapses. In effect, both tactical and strategical surprise are maintained from start to finish. It is a high-speed 'indirect approach' to the enemy's rear areas -- where his vital but vulnerable organs of control and supply are located.(46)

Rommel further emphasized the importance of surprise and speed in mechanized operations:

Concealment of intentions is of the utmost importance in order to provide surprise for one's own operations and thus make it possible to exploit the time taken by the enemy command to react. Deception measures of all kinds should be encouraged, if only to make the enemy commander uncertain and cause him to hesitate and hold back.

Once the enemy has been beaten up, success can be exploited by attempting to overrun and destroy major parts of his disorganized formations. Here again, speed is everything. The enemy must never be allowed time to reorganise. Lightning regrouping for the pursuit and reorganisation of supplies for the pursuing forces are essential.(47)

Another change in the battlefield was the growing importance of deception. Improved capabilities to collect intelligence greatly increased the importance of deception in creating surprise. Barton Whaley's study shows a significant increase in the use of deception in gaining surprise between the First World War and World War II. During the Great War 48% of all cases of surprise involved the use of deception compared to 60% during World War II.(48)

The exploitation of surprise, so greatly hindered in World War I, was now a key element of operations as mechanization restored tactical maneuver to the battlefield. Relative tempo became a decisive factor in exploiting surprise. Rommel commented after the Battle of Alam Halfa, "As a general

rule, any slowing down of one's own operations tends to increase the speed of the enemy's. Since speed is one of the most important factors in motorised warfare, it is easy to see what effect this would have."(49)

Surprise and the Battle of El Alamein, 23 Oct-4 Nov 1942

Because the British were initially outnumbered, they placed considerable emphasis on the use of deception from the outset of the war. Combat in North Africa showed the key role of deception in creating surprise for both the British and the Germans. The battles of Alam Hafa and El Alamein demonstrated the growing complexity of creating and exploiting surprise, the critical role of deception as a means of distraction and security, and the importance of tempo and combat in exploiting the effects of surprise.

The stage for Alamein was set at the Battle of Alam Hafa, 31 August-7 September 1942. The application of surprise was a major consideration for both forces in the planning and execution of this battle. Rommel's plan was to move his mechanized forces into assembly areas in the southern part of the front, taking "all possible precautions against observation."(50) The armor was to infiltrate into its new positions and deeply into camouflaged positions over a period of several days. Rommel insisted that no effort be spared to keep intentions concealed from the British. He planned to strike the British in the southern part of the front achieving surprise of time, place, and force. His intelligence indicated forces in this area were weak and could be quickly overwhelmed.

At the same time, however, the British were conducting extensive deception operations to create defensive surprise. British intercept of German communications through ULTRA enabled them to anticipate the German attack. Surprise of place was lost to the Germans. Furthermore, the British

encouraged the Germans to execute their plan by simulating weakness in the south. Actually, this approach led to strong forces concealed and dug-in on the Alam Halfa ridge. The defense was organized around lethal fire traps where German units would be decimated with indirect fires, tank fires, and air bombardment. To accomplish this the British employed a number of deception means. British ruses included planting of a false "going map" of the terrain on the Germans that decided the direction of their drive. While attempting a wide out-flanking sweep in and up to the Alam Halfa ridge, the German tanks bogged in the sand and were soon repulsed by the waiting Eighth Army, which was not only fully dug in but had actually rehearsed their defence. The British victory not only achieved its goal of spoiling Rommel's offensive but also inflicted proportionately greater casualties.(51)

Just as deception contributed to the British success at Alam Halfa, it was combined with other measures to create surprise of place, time, and force at El Alamein. Initial surprise was the result of a coordinated plan of intelligence, security, and deception. The Germans expected the attack to occur the following month in the south. Deception operations were conducted to reinforce this German expectation. As Air Chief Marshal Tedder summed it up: "A most elaborate campaign of deception had successfully misled the enemy's intelligence." (52) Montgomery's plan to create surprise through distraction and by concealing the exact time and place of his main thrusts was highly successful. His implementation demonstrates the use of deception to create surprise.

Eight key deception plans supported the attack on 23 October 1942. For example, 'Diamond' consisted of a dummy pipeline to indicate the main attack would occur in the south. 'Brian' also supported this deception story by emplacing dummy supply-dumps near the southern end of the pipeline. Munassib

involved the positioning of dummy artillery units, representing three and a half artillery regiments. When the Germans discovered the emplacements were fake, real units were substituted for the dummies. When the attack started the Germans were engaged by what they had assumed to be dummy guns. 'Martello' was conducted to provide security for the movement of the Xth Corps. Three weeks before the attack 4,000 real vehicles, 450 dummies, and over 600 sunshields were concentrated near El Imaiyid. The dummies and sunshields were used to move the entire corp into the forward assembly area at night. Hiding under sunshields and using ingeniously camouflaged positions German air observation was unable to detect the presence of the Corps. Other plans incorporated the use of false radio messages based on well planned scripts to convince the Germans that the main force was miles away from actual positions. In fact, so confident were they in their intelligence analysis that Rommel went to Berlin for discussions, medical treatment and rest.(53)

The Eighth Army's deception plan included numerous operations--all coordinated to convey a false perception. In addition to secret troop redeployments covered by dummy vehicles, tanks, guns, and command posts; a feint was made at Deir el Munassib on 30 September to distract enemy attention from the main attack.

The use of deception was a primary cause of the major victory for the British at El Alamein. Surprise of time, place, and force was achieved. When the initial moral surprise was lost the relentless tempo and continuous application of maneuver and combat power dealt a severe blow to the German force. German losses were 59000 killed wounded and captured (34000 German), 500 tanks, 400 guns and many vehicles. Eighth Army lost 13000 killed, wounded and missing, and 432 tanks out of action.(54)

SECTION IV: THE MODERN BATTLEFIELD

The acceleration of technological development has continued at an unimagined rate. However, the impact of this accelerated development goes beyond improving the technology employed during World War II. Totally new technologies emerged to compound the complexity and lethality of the battlefield. Today, technological capabilities enable forces to see, engage, and move on the battlefield as never before. The principle of surprise plays an extremely important role at all levels of war. Additionally, capabilities to see and engage accurately throughout the depth of the battlefield increase the importance of deception and tempo in creating and exploiting surprise. This section considers the impact of these changes on surprise.

Creating Surprise

Intelligence

During the Second World War the commander combined human intelligence collection with aerial photography. Also, radio and telephone intercept emerged as a significant capability. However these communications intelligence capabilities were limited in a number of areas to include responsiveness and a limited reliance at the tactical level on the extensive use of radio communications to control operations. Also, these capabilities were mostly applicable to the operational level of war.

Today, the leaders at all levels of war employ increasingly sophisticated means of gathering intelligence. Sensors today extend intelligence data collection to all areas of the battlefield. Manned and unmanned intelligence gathering sensors are employed in all operational mediums - space, air, ground, and sea. These sensors make it possible to collect continuous intelligence throughout the full depth of the battlefield.

Also sensors collect intelligence from emissions not visible to human senses. Intelligence collection is now conducted throughout the electromagnetic spectrum. For example, imagery intelligence plays a critical role in identifying the configuration and location of enemy forces. Electronic intelligence also provides data on enemy dispositions and identifies ongoing actions such as important command and control functions which must be considered in planning actions to create surprise. Signal intelligence includes an increased ability to identify and monitor all forms of communication employed by the enemy to direct combat power throughout the battlefield.

However, accurate intelligence in all areas has become critical to the successful application of surprise for at least three reasons. First, the ability to rapidly maneuver and project combat power rapidly has made the battlefield increasingly unforgiving of errors. Clausewitz's comment on the importance of correct moves to create surprise remains true. In fact, the cost of errors is possibly even greater. Accordingly, the greatly increased intelligence capabilities have been accompanied by an increasing requirement for accurate, timely information concerning enemy dispositions, intentions, and vulnerabilities. Second, capabilities to project combat power have also increased dramatically. The means available to project firepower have greatly expanded. All capabilities to concentrate combat power in response to friendly actions must be considered. Failure to do so can rob the element of surprise on which operational plans have been based. Third, just as the capabilities to collect and analyze data have increased, opportunities to present false data have also increased. The ability to produce deceptive signatures causes uncertainty in the validity of information collected.

Thus, the complexity facing the modern commander is considerably greater than that faced by previous commanders. Accordingly, actions to gather the intelligence necessary to achieve surprise have become not only increasingly critical to success but also considerably more complex.

Secrecy and Security

As seen previously, these same intelligence capabilities considerably increase the difficulty of operations security. The ability to see throughout the depth of the battlefield is accompanied by capabilities to rapidly mass combat power. Therefore, the importance of secrecy to support surprise is more critical than ever. Operations security, however, must now include new considerations such as the protection of the force from the full range of intelligence collection capabilities. Greater complexity of intelligence collection results in more complex considerations for providing the security necessary to keep operations secret. At the same time, the growing lethality of indirect and direct fire power makes security increasingly important to protect the force as well as maintain secrecy.

Deception

The ability to 'see' the battlefield in depth and in a variety of ways also makes deception essential to surprise. Improved intelligence collection capabilities make it increasingly difficult to use terrain, weather conditions, or speed to provide security and achieve surprise. Therefore, distraction, achieved through deception, is increasingly important. During the Second World War, deception emerged as an increasingly important factor in creating surprise. Today, this trend continues. The capability to collect information, to react quickly, and to concentrate lethal combat power rapidly make deception essential

to surprise a modern enemy. The ability to 'see' the battlefield as never before has made deception an essential part of all operations: first to provide security-protection from intelligence systems, and second to ensure surprise-to prevent the enemy from reacting to planned operations before surprise can be achieved.

However, as elsewhere on the battlefield, growing capabilities lead to growing complexity. The goal of deception remains the same - to convince the opposing force that what they are "seeing" is real, and that their interpretation of what they are seeing is correct.(55) It must be believable. It must fit their preconceptions and be supported with data from the multiple sources of intelligence collection available to them. Thus, deception today requires technical support.

The major offensive deception measures continue to include feints, demonstrations, and ruses; however, today these measures must include the simulation of key signatures which also accompany the events these actions attempt to portray. The management of signatures is a major part of deception today. Every vehicle, weapons system, and unit produces a unique signature. Since these signatures are subject to collection and interpretation by the enemy, they must be controlled or highlighted by deliberate or incidental action. While tactical commanders must continue to focus on visual signatures, as on the World War II battlefield, today they must also be aware of other signatures and emissions as well. For example, thermal signatures and radar signatures must be managed to provide security and to support the deception plan.

Furthermore, as intelligence systems become increasingly responsive to lower levels of organization, deception becomes increasingly important and complex at lower levels of combat. Therefore, the creation of conditions for surprise

requires an increasingly sophisticated coordination of offensive deception measures (feints, demonstrations, ruses, and displays) with multi-spectral technical support (physical/visual, electro-magnetic, audio-acoustic, thermal-light, and human). As collection capabilities expand, deception measures must also be expanded to provide realistic perceptions to the enemy.

Maneuver

Secrecy and speed, in Erfurth's opinion, are mutually dependent on each other. "If secrecy cannot be maintained, speed must be increased; if speed is not practical, the enemy must be kept wholly ignorant of the impending operations. Otherwise, surprise can never be achieved." (56) As just discussed, secrecy on today's battlefield is increasingly difficult to achieve and maintain. Consequently, as Erfurth alluded, speed continues to become increasingly important in achieving surprise. This growing requirement for speed has been matched by new capabilities for rapid maneuver. Command and control systems expedite the control of tactical maneuver while systems such as the M1 tank, the M2 infantry fighting vehicle, and the AH 64 helicopter provide more rapid maneuver. These improvements in rapid maneuver have dramatically increased the tempo of operations at the tactical level.

Exploiting Surprise

Speed in execution is essential not only to creating surprise, but also to exploiting surprise. The enemy is capable of rapid response even when surprised; accordingly, superior tempo is critical. To achieve superior tempo on the modern battlefield the commander must focus on both increasing his tempo as well as slowing down the tempo of the enemy. The rapid tactical tempo to the current battlefield requires the rapid execution of planning and reaction as well as the efficient synchronization of air, ground, and firepower elements.

Therefore, tempo continues to be key in the exploitation of surprise. Just as mechanization changed the nature of tactical maneuver on the battlefield, new developments today continue to change the concept of maneuver. This change is taking place in the form of increased tempos and increased lethality. New capabilities offer opportunities to increase tactical tempo by air maneuver and maneuver by fires using speed in conjunction with intelligence, security, and deception to create surprise by continually presenting the enemy with new situations which are concluded before he is able to react. The emergence of directed energy and increasing impact of electronic warfare offer capabilities to effect relative tempo by slowing down the enemy.

SECTION V: DOCTRINAL IMPLICATIONS

The Army's fundamental doctrine, FM 100-5 Operations, states that AirLand Battle doctrine is rooted in the nine principles of war. The manual provides a definition of surprise, offers a brief description of the principle, and stresses the importance in AirLand Battle Operations. Surprise is defined as striking the enemy at a time or place, or in a manner, for which he is unprepared. The short definition of surprise is followed by an incomplete discussion of the principle which provides a brief coverage of the causes, effects, and exploitation of surprise. Although the importance of surprise is emphasized throughout the manual, the elements and dynamics of surprise are not fully discussed. For example, while the doctrine calls for ruthless exploitation of surprise it does not elaborate on the dynamics of tempo or concentration of combat power necessary to exploit surprise. While FM 100-5 stresses the importance of surprise, the increasing complexity and new requirements for creating and exploiting surprise require a more comprehensive look at this critical principle to ensure it is fully employed on the battlefield.

Maneuver doctrine under FM 100-5 also needs a stronger theoretical basis from which to consider the principle of surprise. Like FM 100-5, field circulars for Corps and below also emphasize the importance of surprise. However, their treatment of the relationship of maneuver at lower levels to creating and exploiting surprise are also incomplete. While their emphasis on gaining surprise is appropriate, the consideration of surprise is incomplete.

In view of its historical validation, surprise is clearly undervalued in U.S. doctrine. Although a comprehensive examination of the reasons for this is beyond the scope of this paper, some brief observations should be made. Hans Delbruck said the strategy of annihilation seeks the overthrow of the enemy's military power while the strategy of attrition or exhaustion is usually employed by those whose means are not great enough to enable the direct overthrow of the

enemy and who usually rely on an indirect approach. Likewise, Clausewitz suggests that the weaker the forces at the disposal of the commander, the more appealing the use of cunning becomes. Russell F. Weigley contends that from the American experience has evolved a way of war which seeks total destruction of the enemy's armed force and the complete overthrow of its government. The wealth of the country and a national preference for unlimited aims of war produce doctrine which emphasizes the direct approach. Thus, while the value of surprise is recognized, the creation of surprise is not necessary; its absence can be dealt with by a concentrated direct application of overwhelming force. Although past experience has enforced these views, the advent of limited warfare and modern technology have driven a change in the face of battle. The United States is no longer in a position in which it can rely on the direct application of overwhelming strength to win battles. If conditions for surprise are absent they must be created.

The preceeding section has shown that as conditions change, methods to achieve and exploit surprise must also change. Methods sufficient to achieve and exploit surprise during World War I were inadequate by World War II. Today an unprecedented rate of technological change is further compounded by a diverse spectrum of political, environmental and threat conditions. Consequently, doctrine cannot provide methods which cover all conditions and keep up with today's rate of change and growing complexity; therefore, it must do more than express the importance of surprise. Fortunately, while conditions and means change, the fundamental dynamics and elements of the principle remain constant. Doctrine must provide a complete understanding of the "why" behind methods and means. Only a complete appreciation of the principle - its causes and its effects - will enable commanders to employ it on a constantly changing battlefield. Only then can surprise become an integral part of AirLand Battle operations.

SECTION VI: CONCLUSION

It is not enough to pay mere lip-service to surprise. Strong emphasis should be laid upon new tactics, for these offer the best way of achieving surprise. Novel ideas should constantly be tested, and old ideas not always repeated. Theory and practice must cooperate to find fresh ways and means of war.(57)
Brfurth

This paper provides a brief consideration of the nature and characteristics of surprise on the modern battlefield. Four major ideas have been presented. First, methods to achieve surprise have changed significantly as battlefield conditions changed. The most significant factor in this change has been the development of technology. As new technological capabilities have made the battlefield increasingly complex, methods to achieve and exploit surprise have also become increasingly complex. Second, while the fundamental effects of surprise have remained constant, their impact on the battlefield has changed. Increasing tempo requires greater command and control. The ability to react faster affects both the creation and exploitation of surprise. Third, the relative importance of surprise has increased as capabilities to see and project combat power have increased. Capabilities to "see" the battlefield and project force have increased dramatically. If the enemy knows when we are coming, in what strength, and where; he will be able to react and project combat power sufficient to place our forces at a disadvantage. Fourth, there currently exists a doctrinal void in considering the elements and dynamics of surprise on the modern battlefield. Current doctrine recognizes the importance of surprise, but it does not provide a complete presentation of the elements and dynamics of the principle. Finally, surprise is just one principle of war. Each principle needs to be examined comprehensively and the impact of other principles on each one must be explored.

In conclusion, the principle of surprise is not adequately addressed in doctrine, nor has the approach to the dynamics of the principle received the level of sophistication required on the modern battlefield. Doctrine must reflect the growing importance and complexity of surprise. On the emerging mid- to high-intensity battlefield there is no room for trial and error. If the advantage of surprise does not exist current methods must be employed to create surprise and then to aggressively exploit it. Without a comprehensive approach to surprise this is not possible. Simple recognition of its importance and descriptions of surprise will not suffice. The first step is a continuous, comprehensive examination of surprise. The Army community needs to think, talk, and write about the dynamics of surprise at length. Methods and techniques for achieving and exploiting surprise must be infused not only in doctrinal development, but also in training, materiel, and organizational development. The second step is to broaden this appreciation of surprise beyond the tactical level of war. Just as this paper provides a brief study of tactical surprise, the same must be done for operational and strategic surprise. Surprise at each level of war has unique considerations and dynamics; each level interacts with the other. The third step is to make this theoretical understanding of surprise an integral part of developing methods and techniques to suit current conditions throughout the complex array of possibilities faced by today's Army. A serious consideration of surprise is essential to meeting the demands of the modern battlefield. We cannot afford platitudes - the cost is too great.

ENDNOTES

1. Department of the Army, Field Manual 100-5, Operations, (U.S. Government Printing Office, 1986) p. 14.
2. Waldemar Erfurth, Surprise, (Harrisburg, PA: Military Service Publishing Company, 1943) p. 195.
3. Giulio Douhet, Quoted in the Air Force Space Master Plan, 1982.
4. Carl von Clausewitz, On War, Edited and translated by Peter Paret and Michael Howard (Princeton: Princeton University Press, 1976), p.198.
5. Ibid., p.360.
6. Erfurth, op. cit., p. 195.
7. Clausewitz, op. cit., p. 198.
8. Ibid., p. 361.
9. Ibid., pp. 200-201.
10. Richard Simpkin, Race to the Swift, (New York: Brassey's Defence Publishers, 1985), p. 182.
11. Ibid., pp. 182-184.
12. Wharton Bailey, Strategem: Deception and Surprise in War, (Cambridge MA: Center for International Studies, Massachusetts Institute of Technology, 1969), p.215.
13. Ibid., p.215
14. Clausewitz, op. cit., p.151.
15. Erfurth, op. cit., p. 194.
16. Wharton Bailey, op. cit., p.217
17. Clausewitz, op. cit., p. 198.
18. Ibid., p. 360.
19. S.L.A. Marshal, Men Against Fire, (Gloucester, Mass: Peter Smith, 1978), p. 108.
20. Sun Tzu, The Art of War, translated by S. B. Griffith, (New York: Oxford University Press, 1963), p. 84.
21. Erfurth, op. cit., p. 39.
22. Sun Tzu, op. cit., p. 66.

23. Ibid., p. 106.
24. Clausewitz, op. cit., p. 24.
25. Thomas A. Savoie, "Tactical Deception: A Lost Art?" (Ft. Leavenworth, KS: Command and General Staff College, 1985), p. 1.
26. Patrick M. Hughes, "Intelligence, Electromagnetic Warfare and Deception (IEWD) Information Paper," Unpublished Paper, 1986.
27. Mac Arthur, quoted in Whaley, op. cit., p. 138.
28. FM 100-5, op. cit., p. 12.
29. Huba Wass de Czege, "Understanding and Developing Combat Power." (Unpublished Paper, 1983), p.
30. B. H. Liddell Hart, Strategy, (New York: Frederick A. Praeger, Inc., 1967), p. 337.
31. Ibid., p. 25.
32. Ibid., p. 341.
33. Clausewitz, op. cit., p. 198.
- *34. Erfurth, op. cit., p.
35. Liddell Hart, op. cit., p. 349.
36. Simpkin, op. cit., pp. 183-184.
37. Clausewitz, op. cit., p. 119.
38. Ibid., p. 119.
39. Sun Tzu, op. cit., p.101
40. Kenneth Macksey, Technology in War, (New York: Prentice Hall Press, 1986), p. 94.
41. B.H. Liddell Hart, The Real War 1914-1918, (Boston: Little, Brown and Company, 1930), p.351.
42. R. Ernest Dupuy and Trevor N. Dupuy, The Encyclopedia of Military History, (New York: Harper & Row, Publishers, 1986) p. 970.
43. Timothy T. Lupfer, "The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War", (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1981), p. 40.

44. Ibid., p. 40.

45. Kenneth Macksey, Guderian Creator of the Blitzkrieg, (Briarcliff Manor, NY: Stein and Day Publishers, 1975), p. 73.

46. B.H. Liddell Hart, Memoirs Vol I, (London: Cassell Ltd, 1967), pp. 164-165.

47. Erwin Rommel, The Rommel Papers, Edited by B.H. Liddell Hart, (New York: Harcourt, Brace & World, Inc., 1953.), p. 200.

48. Whaley, op. cit., p. 204.

49. Rommel, op. cit., p. 285.

50. Rommel, op. cit., p. 273.

51. Charles Cruickshank, Deception in World War II, (New York: Oxford University Press, 1979), p. 24-33.

52. Whalen, op. cit., p. 307.

53. Ibid, p. 307.

54. Ibid., p.309.

55. Hughes, Patrick M. "Intelligence, Electromagnetic Warfare and Deception (IEWD) Information Paper," (Unpublished Paper, 1986).

56. Erfurth, ob. cit., p. 39.

57. Erfurth, ob. cit., p. 197.

BIBLIOGRAPHY

MILITARY PUBLICATIONS

- FM 100-5. Operations. Washington, D.C.: Department of the Army, 1986.
- FC 90-2. Battlefield Deception. Fort Huachuca, Arizona: US Army Intelligence Center and School, 1986.
- FM 90-2. Tactical Deception. Washington, D.C.: Department of the Army, 1978.
- FM 34-1. Intelligence and Electronic Warfare Operations. Washington, D.C.: Department of the Army, 1984.

BOOKS

- Clausewitz, Carl von. On War. Edited and translated by Peter Paret and Michael Howard. Princeton: Princeton University Press, 1976.
- Cruickshank, Charles G. Deception in World War II. New York: Oxford University Press, 1980.
- Daniel, Donald C. and Gerbig, Katherine L., eds. Strategic Military Deception. New York: Oxford University Press, 1980.
- Dupuy, Ernest R. and Dupuy, Trevor N. The Encyclopedia of Military History from 3500 B.C. to the Present. New York: Harper & Row, 1986.
- Erfurth, Waldemar. Surprise, Harrisburg, PA: Military Service Publishing Company, 1943.
- Gooch, John and Perlmuter, Amos, eds. Military Deception and Strategic Surprise. Totowa, NJ: Frank Cass and Co., 1982.
- Handel, Michael I. ed. Clausewitz and Modern Strategy. Totowa, NJ: Frank Cass and Company Limited, 1986.
- House, Jonathan M. Towards Combined Arms Warfare: A Survey of 20th Century Tactics, Doctrine and Organization. Fort Leavenworth KS: U.S. Army Command and General Staff College, 1984.
- Liddell Hart. History of the Second World War. New York: G. P. Putnam's Sons, 1970.
- Liddell Hart. Memoirs. 2 vols. London: Cassell Ltd, 1967.
- Liddell Hart. Strategy. New York: Praeger, 1967.
- Liddell Hart. The Real War, 1914-1918. Boston: Little Brown and Company, 1930 (reissued in 1964).

Macksey, Kenneth. Guderian Creator of the Blitzkrieg. Briarcliff Manor NY: Stein and Day Publishers, 1975.

Macksey, Kenneth. Technology in War. New York: Prentiss Hall Press, 1986.

Marshall S. L. A. Men Against Fire: The Problem of Battle Command in Future War. Gloucester, MASS: Peter Smith, 1978.

Paret, Peter. Makers of Modern Strategy. Princeton, New Jersey: Princeton University Press, 1986.

Rommel, Erwin. The Rommel Papers. Edited by B. H. Liddell Hart, New York: Harcourt, Brace & World, Inc., 1953.

Simpkin, Richard E. Deep Battle. New York: Brassey's Defence Publishers, 1987.

Simpkin, Richard E. Race to the Swift. New York: Brassey's Defence Publishers, 1985.

Sun Tzu, The Art of War. Trans. by S. B. Griffith, New York: Oxford University Press, 1963.

Weigley, Russell F. The American Way of War. Bloomington, Indiana: Indiana University Press, 1973.

Whaley, Barton. Strategem: Deception and Surprise in War. Cambridge, MA: Center for International Studies, Massachusetts Institute of Technology 1969.

PERIODICALS

Brown, Robert F. "MR Update: Deception." Military Review. Mar 1987, pp. 46-47.

Kahn, Muhammad N. "Surprise and Deception." Military Review. Mar 1959, pp. 100-104.

Trainor, Bernard E. "Deception". Marine Corps Gazette. Oct 1986, pp. 57-61.

Tullbane, Joseph D. "RSTA: The Key to Success in Deep Battle." Signal. Sep 1986, pp. 37-40.

Wass de Czege, Huba. "How to Change An Army." Military Review. Nov 1984, pp. 32-49.

REPORTS

Hughes, Patrick M. "Intelligence, Electromagnetic Warfare and Deception (IEWD) Information Paper," Unpublished Paper, 1986.

Lupfer, Timothy T. "The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War," Leavenworth Papers No. 4. Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1981.

Savoie, Thomas A. "Tactical Deception: A Lost Art?." Ft. Leavenworth, KS: Command and General Staff College, 1985.

Wass de Czege, Huba. "Understanding and Developing Combat Power. (Unpublished Paper), 1983.

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